

Connecting via Winsock to STN

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LOGINID:SSPTANSC1625

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TERMINAL (ENTER 1, 2, 3, OR ?):2

***** Welcome to STN International *****

| | | | |
|--------------|---|--|---|
| NEWS | 1 | | Web Page for STN Seminar Schedule - N. America |
| NEWS | 2 | JUL 28 | CA/CAPLUS patent coverage enhanced |
| NEWS | 3 | JUL 28 | EPFULL enhanced with additional legal status information from the epoline Register |
| NEWS | 4 | JUL 28 | IFICDB, IFIPAT, and IFIUDB reloaded with enhancements |
| NEWS | 5 | JUL 28 | STN Viewer performance improved |
| NEWS | 6 | AUG 01 | INPADOCDB and INPAFAMDB coverage enhanced |
| NEWS | 7 | AUG 13 | CA/CAPLUS enhanced with printed Chemical Abstracts page images from 1967-1998 |
| NEWS | 8 | AUG 15 | CAOLD to be discontinued on December 31, 2008 |
| NEWS | 9 | AUG 15 | Caplus currency for Korean patents enhanced |
| NEWS | 10 | AUG 27 | CAS definition of basic patents expanded to ensure comprehensive access to substance and sequence information |
| NEWS | 11 | SEP 18 | Support for STN Express, Versions 6.01 and earlier, to be discontinued |
| NEWS | 12 | SEP 25 | CA/CAPLUS current-awareness alert options enhanced to accommodate supplemental CAS indexing of exemplified prophetic substances |
| NEWS | 13 | SEP 26 | WPIDS, WPINDEX, and WPIX coverage of Chinese and Korean patents enhanced |
| NEWS | 14 | SEP 29 | IFICLS enhanced with new super search field |
| NEWS | 15 | SEP 29 | EMBASE and EMBAL enhanced with new search and display fields |
| NEWS | 16 | SEP 30 | CAS patent coverage enhanced to include exemplified prophetic substances identified in new Japanese-language patents |
| NEWS | 17 | OCT 07 | EPFULL enhanced with full implementation of EPC2000 |
| NEWS | 18 | OCT 07 | Multiple databases enhanced for more flexible patent number searching |
| NEWS | 19 | OCT 22 | Current-awareness alert (SDI) setup and editing enhanced |
| NEWS | 20 | OCT 22 | WPIDS, WPINDEX, and WPIX enhanced with Canadian PCT Applications |
| NEWS | 21 | OCT 24 | CHEMLIST enhanced with intermediate list of pre-registered REACH substances |
| | | | |
| NEWS EXPRESS | JUNE 27 08 | CURRENT WINDOWS VERSION IS V8.3, AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008. | |
| | | | |
| NEWS HOURS | STN Operating Hours Plus Help Desk Availability | | |
| NEWS LOGIN | Welcome Banner and News Items | | |
| NEWS IPC8 | For general information regarding STN implementation of IPC 8 | | |

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 10:40:28 ON 10 NOV 2008

| | | |
|----------------------|------------|---------|
| => fil reg | | |
| COST IN U.S. DOLLARS | SINCE FILE | TOTAL |
| | ENTRY | SESSION |
| FULL ESTIMATED COST | 0.21 | 0.21 |

FILE 'REGISTRY' ENTERED AT 10:40:55 ON 10 NOV 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 9 NOV 2008 HIGHEST RN 1071762-23-6
DICTIONARY FILE UPDATES: 9 NOV 2008 HIGHEST RN 1071762-23-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

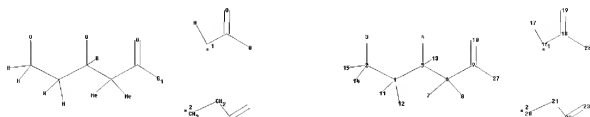
TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>
Uploading C:\Program Files\STNEXP\Queries\10559389.str



```

chain nodes :
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 27 28
ring/chain nodes :
1 2 3 4 5
chain bonds :
1-11 1-12 2-14 2-15 5-6 5-13 6-7 6-8 6-9 9-10 9-27 16-17 16-18 18-19
18-28 20-21 21-22 22-23
ring/chain bonds :
1-2 1-5 2-3 4-5
exact/norm bonds :
1-2 1-5 2-3 4-5 9-10 9-27 18-19 18-28
exact bonds :
1-11 1-12 2-14 2-15 5-6 5-13 6-7 6-8 6-9 16-17 16-18 20-21 21-22 22-23

```

G1:[*1],[*2]

Match level :

```

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS
18:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 27:CLASS 28:CLASS

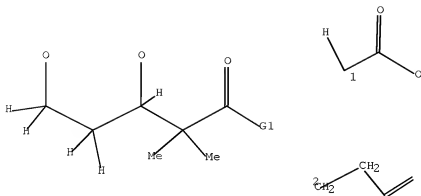
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L1 STRUCTURE UPLOADED

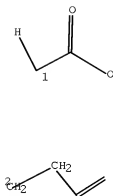
=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 [01],[02]



Structure attributes must be viewed using STN Express query preparation.

=> s sss sam l1

SAMPLE SEARCH INITIATED 10:41:35 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 1376 TO ITERATE

100.0% PROCESSED 1376 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 25295 TO 29745

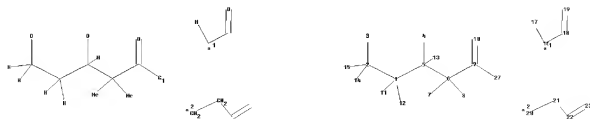
PROJECTED ANSWERS: 0 TO 0

L2

0 SEA SSS SAM L1

=>

Uploading C:\Program Files\STNEXP\Queries\10559389A.str



chain nodes :

```

6  7  8  9  10 11 12 13 14 15 16 17 18 19 20 21 22 23 27
ring/chain nodes :
1  2  3  4  5
chain bonds :
1-11 1-12 2-14 2-15 5-6 5-13 6-7 6-8 6-9 9-10 9-27 16-17 16-18 18-19
20-21 21-22 22-23
ring/chain bonds :
1-2 1-5 2-3 4-5
exact/norm bonds :
1-2 1-5 2-3 4-5 9-10 9-27 18-19
exact bonds :
1-11 1-12 2-14 2-15 5-6 5-13 6-7 6-8 6-9 16-17 16-18 20-21 21-22 22-23

```

G1:[*1],[*2]

Match level :

```

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS
18:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 27:CLASS

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L3 STRUCTURE UPLOADED

=> d le

L3 HAS NO ANSWERS

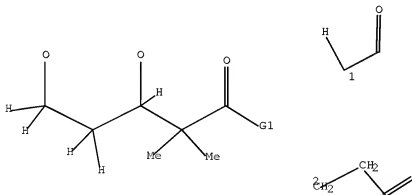
'LE ' IS NOT A VALID STRUCTURE FORMAT KEYWORD

ENTER STRUCTURE FORMAT (SIM), NOS:end

=> d l3

L3 HAS NO ANSWERS

L3 STR



G1 [@1],[@2]

Structure attributes must be viewed using STN Express query preparation.

=> s sss sam l3

SAMPLE SEARCH INITIATED 10:44:13 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 2005 TO ITERATE

99.8% PROCESSED 2000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

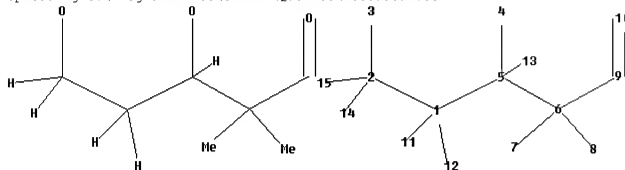
0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 37414 TO 42786
PROJECTED ANSWERS: 0 TO 0

L4 0 SEA SSS SAM L3

=>

Uploading C:\Program Files\STNEXP\Queries\10559389B.str



chain nodes :
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ring/chain nodes :
1 2 3 4 5
chain bonds :
1-11 1-12 2-14 2-15 5-6 5-13 6-7 6-8 6-9 9-10
ring/chain bonds :
1-2 1-5 2-3 4-5
exact/norm bonds :
1-2 1-5 2-3 4-5 9-10
exact bonds :
1-11 1-12 2-14 2-15 5-6 5-13 6-7 6-8 6-9

G1

Match level :

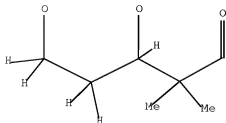
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS

L5 STRUCTURE UPLOADED

=> D L5

L5 HAS NO ANSWERS

L5 STR



G1

Structure attributes must be viewed using STN Express query preparation.

=> S SSS SAM L5

SAMPLE SEARCH INITIATED 10:45:55 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 12924 TO ITERATE

15.5% PROCESSED 2000 ITERATIONS

2 ANSWERS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 251668 TO 265292

PROJECTED ANSWERS: 43 TO 473

L6

2 SEA SSS SAM L5

=> D SCAN

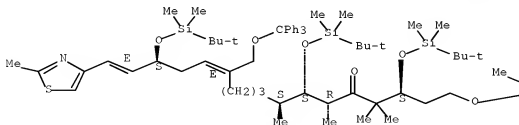
L6 2 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN

IN 12,16-Heptadecadien-5-one, 1,3,7,15-tetrakis[(1,1-dimethylethyl)dimethylsilyl]oxy]-4,4,6,8-tetramethyl-17-(2-methyl-4-thiazolyl)-12-[(triphenylmethoxy)methyl]-, (3S,6R,7S,8S,12E,15S,16E)-
MF C69 H113 N O6 S Si4

Absolute stereochemistry. Rotation (-).

Double bond geometry as shown.

PAGE 1-A



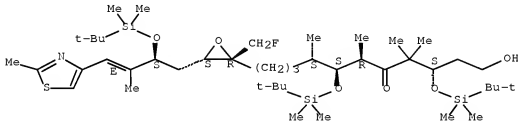


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L6 2 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
 IN 5-Undecanone, 3,7-bis[[[1,1-dimethylethyl]dimethylsilyloxy]-11-[(2R,3S)-3-
 [(2S,3E)-2-[[[1,1-dimethylethyl]dimethylsilyloxy]-3-methyl-4-(2-methyl-4-
 thiazolyl)-3-buten-1-yl]-2-(fluoromethyl)-2-oxiranyl]-1-hydroxy-4,4,6,8-
 tetramethyl-, (3S,6R,7S,8S)-
 MF C45 H86 F N O6 S Si3

Absolute stereochemistry.
 Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s sss FULL l1
 FULL SEARCH INITIATED 10:47:48 FILE 'REGISTRY'
 FULL SCREEN SEARCH COMPLETED - 27721 TO ITERATE

100.0% PROCESSED 27721 ITERATIONS
 SEARCH TIME: 00.00.01

20 ANSWERS

L7 20 SEA SSS FUL L1

=> SAVE TEMP WEST10559389/A
 ENTER L#, L# RANGE, ALL, OR (END):END

=> SAVE TEMP WEST10559389/A L7
ANSWER SET L7 HAS BEEN SAVED AS 'WEST10559389/A'

| => FIL CAPLUS | SINCE FILE | TOTAL |
|----------------------|------------|---------|
| COST IN U.S. DOLLARS | ENTRY | SESSION |
| FULL ESTIMATED COST | 183.88 | 184.09 |

FILE 'CAPLUS' ENTERED AT 10:48:41 ON 10 NOV 2008
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FILE COVERS 1907 - 10 Nov 2008 VOL 149 ISS 20
FILE LAST UPDATED: 9 Nov 2008 (20081109/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>

=> S L7
L8

8 L7

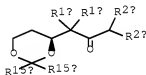
=> S L8 AND (AY<2003 OR PY<2003 OR PRY<2003)
4499665 AY<2003
22959179 PY<2003
3967969 PRY<2003

L9 4 L8 AND (AY<2003 OR PY<2003 OR PRY<2003)

=> D IBIB ABS HITSTR 1-4 L9

L9 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:511314 CAPLUS Full-text
DOCUMENT NUMBER: 139:85166
TITLE: Method for producing C1-C6 fragments of epothilones and the derivatives thereof
INVENTOR(S): Klar, Ulrich; Berger, Markus; Buchmann, Bernd; Schwede, Wolfgang; Skuballa, Werner
PATENT ASSIGNEE(S): Schering Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|--------------------------------------|----------------|
| WO 2003053949 | A1 | 20030703 | WO 2002-EP14758 | 20021223 <-- |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| DE 10164592 | A1 | 20030703 | DE 2001-10164592 | 20011221 <-- |
| AU 2002356783 | A1 | 20030709 | AU 2002-356783 | 20021223 <-- |
| US 20030176710 | A1 | 20030918 | US 2002-326263 | 20021223 <-- |
| PRIORITY APPLN. INFO.: | | | DE 2001-10164592 | A 20011221 <-- |
| | | | WO 2002-EP14758 | W 20021223 <-- |
| OTHER SOURCE(S): | | | CASREACT 139:85166; MARPAT 139:85166 | |
| GI | | | | |



I

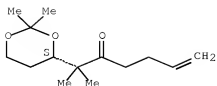
AB The invention relates to C1-C6 fragments I [R1a, R1b = H, C1-10-alkyl, aryl, C7-20-aralkyl, (CH2)m; m = 2 - 5; R2a, R2b = H, C1-10-alkyl, C1-10-alkenyl, C1-10-alkynyl, C7-20-aralkyl, (CH2)n; n = 2 - 5; R15a, R15b = H, C1-10-alkyl, aryl, C7-20-aralkyl, (CH2)q; q = 3 - 6] of epothilones and to an efficient method for producing such fragments and the derivs. thereof. Thus, (4S)-4-(2-methyl-3-oxohept-6-en-2-yl)-2,2-dimethyl-1,3-dioxane [I; R1a = R1b = Me, R2a = CH2CH:CH2, R2b = H, R15a = R15b = Me] was prepared from (3S)-1-hydroxy-2,2-dimethyl-3-(tetrahydropyranyloxy)-4-pentene, (S)-HOCH2CMe2CH(OTHP)CH:CH2, via O-benzylation with PhCH2Br, hydroboration with BH3-THF complex, dehydrotetrahydropyranylation-isopropylidenation with Me2C(OMe)2 in MeCMe containing catalytic tosyl acid, hydrogenolytic debenzoylation, Swern oxidation, Grignard reaction with MeMgBr, oxidn, with TPAT in CH2Cl2 contg, N0methylmorpholine N-oxide and alkylation with allyl bromide.

IT 305840-13-5P 552313-46-9P 552313-55-0P
 552313-56-1P 552313-65-2P 552313-66-3P
 552313-76-5P 552313-77-6P 552313-87-8P
 552313-88-9P 552313-98-1P 552313-99-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of C1-C6 fragments of epothilones and their derivs.)

RN 305840-13-5 CAPLUS

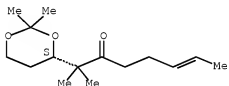
CN 6-Hepten-3-one, 2-[(4S)-2,2-dimethyl-1,3-dioxan-4-yl]-2-methyl- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



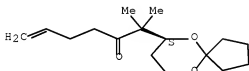
RN 552313-46-9 CAPLUS
 CN 6-Octen-3-one, 2-[(4S)-2,2-dimethyl-1,3-dioxan-4-yl]-2-methyl- (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.



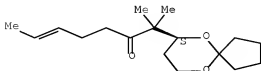
RN 552313-55-0 CAPLUS
 CN 6-Octen-3-one, 2-[(7S)-6,10-dioxaspiro[4.5]dec-7-yl]-2-methyl- (CA INDEX NAME)

Absolute stereochemistry.



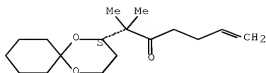
RN 552313-56-1 CAPLUS
 CN 6-Hepten-3-one, 2-(2S)-6,10-dioxaspiro[4.5]dec-7-yl-2-methyl- (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry unknown.



RN 552313-65-2 CAPLUS
 CN 6-Hepten-3-one, 2-(2S)-1,5-dioxaspiro[5.5]undec-2-yl-2-methyl- (CA INDEX NAME)

Absolute stereochemistry.

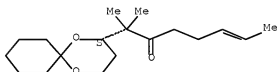


RN 552313-66-3 CAPLUS

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Absolute stereochemistry.

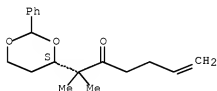
Double bond geometry unknown.



RN 552313-76-5 CAPLUS

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Absolute stereochemistry.

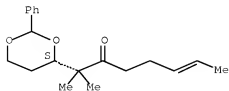


RN 552313-77-6 CAPLUS

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Absolute stereochemistry.

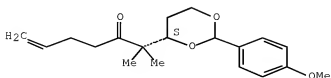
Double bond geometry unknown.



RN 552313-87-8 CAPLUS

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(CA INDEX NAME)

Absolute stereochemistry.

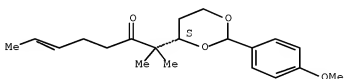


RN 552313-88-9 CAPLUS

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INDEX NAME)

Absolute stereochemistry.

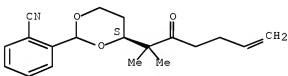
Double bond geometry unknown.



RN 552313-98-1 CAPLUS

CN Benzonitrile, 2-[(4S)-4-(1,1-dimethyl-2-oxo-5-hexen-1-yl)-1,3-dioxan-2-yl]-
(CA INDEX NAME)

Absolute stereochemistry.

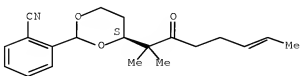


RN 552313-99-2 CAPLUS

CN Benzonitrile, 2-[(4S)-4-(1,1-dimethyl-2-oxo-5-hepten-1-yl)-1,3-dioxan-2-
yl]- (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2003:133222 CAPLUS Full-text
 DOCUMENT NUMBER: 138:187562
 TITLE: Preparation of protected

3,5-dihydroxy-2,2-dimethyl-valeroamides as
 intermediates for the synthesis of epothilones and
 derivatives

INVENTOR(S): Westermann, Juergen; Petrov, Orlin; Platzek, Johannes
 PATENT ASSIGNEE(S): Schering Aktiengesellschaft, Germany
 SOURCE: PCT Int. Appl., 51 pp.
 CODEN: PIXXD2

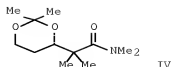
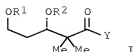
DOCUMENT TYPE: Patent
 LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|------------------|-----------------|
| WO 2003014063 | A2 | 20030220 | WO 2002-EP8726 | 20020805 <-- |
| WO 2003014063 | A3 | 20030501 | | |
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| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
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| EP 1412322 | A2 | 20040428 | EP 2002-774500 | 20020805 <-- |
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| JP 2004537589 | T | 20041216 | JP 2003-519015 | 20020805 <-- |
| CN 1807403 | A | 20060726 | CN 2005-10076459 | 20020805 <-- |
| MX 2004PA00954 | A | 20040420 | MX 2004-PA954 | 20040130 <-- |
| IN 2004DN00467 | A | 20060310 | IN 2004-DN467 | 20040226 <-- |
| NO 2004000912 | A | 20040302 | NO 2004-912 | 20040302 <-- |
| ZA 2004001727 | A | 20050412 | ZA 2004-1727 | 20040302 <-- |
| US 20050272731 | A1 | 20051208 | US 2005-149331 | 20050610 <-- |
| US 7368568 | B2 | 20080506 | | |
| US 20080161580 | A1 | 20080703 | US 2008-43401 | 20080306 <-- |
| PRIORITY APPLN. INFO.: | | | DE 2001-10138348 | A 20010803 <-- |
| | | | US 2001-313015P | P 20010820 <-- |
| | | | CN 2002-815237 | A3 20020805 <-- |
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| | | | WO 2002-EP8726 | W 20020805 <-- |
| | | | US 2005-149331 | A3 20050610 <-- |

OTHER SOURCE(S): MARPAT 138:187562
 GI



AB The present invention discloses preparation of novel protected 3,5-dihydroxy-2,2-dimethyl-valeroamide derivs., such as I [R1, R2 = benzyl, 4-methoxybenzyl, 3,4-dimethoxybenzyl, THP, TBDMS, TMS, TES, TIP, TBDPS, MEM, MOM, allyl, trityl; R1R2 = ketal; Y = NAlA2; Al, A2 = alkyl, aryl, benzyl, OH, OMe, O-benzyl, heterocyclyl], and intermediates thereof for the synthesis of epothilones and epothilone derivs. Thus, 1-dimethylamino-2-methyl-1-trimethylsilyl-propene (obtained by the reaction of N,N,2-trimethyl-propionamide and trimethylsilyl chloride), was reacted with 3-(benzyloxy)-1-propanal to provide N,N-dimethyl-5-benzyloxy-2,2-dimethyl-3-hydroxypentanamide, which on oxidation afforded N,N-dimethyl-5-benzyloxy-2,2-dimethyl-3-oxo-pentanamide (II). II, on catalytic reduction in presence of RuCl2 and S-BiNAP, afforded I (R1 = CH2Ph; R2 = H; Y = NMe2), which was deprotected to afford I [R1, R2 = H; Y = NMe2 (III)]. III was reacted with acetone-dimethylketal to afford 3,5-dihydroxy-2,2-dimethyl-valeroamide derivative (IV).

IT 305840-13-5P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of protected 3,5-dihydroxy-2,2-dimethyl-valeroamide derivs.

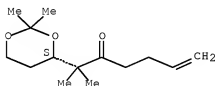
and

intermediates thereof in preparation of epothilones and epothilone derivs.)

RN 305840-13-5 CAPLUS

CN 6-Hepten-3-one, 2-[(4S)-2,2-dimethyl-1,3-dioxan-4-yl]-2-methyl- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L9 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:157050 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 136:216592

TITLE: Procedures for the production of 12,13-cyclopropylepothilone derivatives, as well as for their use in pharmaceutical preparations

PATENT ASSIGNEE(S): Schering Ag, Germany

SOURCE: Ger. Offen., 64 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

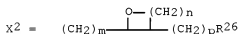
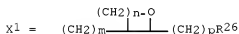
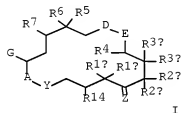
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|------------------|--------------|
| DE 10041470 | A1 | 20020228 | DE 2000-10041470 | 20000818 <-- |
| PRIORITY APPLN. INFO.: | | | DE 2000-10041470 | 20000818 <-- |
| OTHER SOURCE(S): | CASREACT 136:216592; MARPAT 136:216592 | | | |

GI



AB The present invention describes new 6-alkenyl- and 6-alkynylepothilone derivs., e.g., I [R1a, R1b = H, C1-10-alkyl, aryl, C7-20-aralkyl; R1aR1b = (CH2)r, CH2OCH2; r = 1 - 5; R2a = H, C1-10-alkyl, aryl, C7-20-aralkyl, (CH2)m-C.tplbond.C-(CH2)pR26, (CH2)m-C:C-(CH2)pR26, X1, X2; n = 0 - 5; p = 0 - 3; m = 0 - 4; R2b = (CH2)m-C.tplbond.C-(CH2)pR26, (CH2)m-C:C-(CH2)pR26, X1, X2; R3a = H, C1-10-alkyl, aryl, C7-20-aralkyl; R3b = O-protecting group; R4 = H, C1-10-alkyl, aryl, C7-20-aralkyl, halogen, OH, O-protecting group, CN; R5 = H, C1-10-alkyl, aryl, C7-20-aralkyl, (CH2)s-T; S = 1 - 4; T = OH, O-protecting group, halogen; R6R7 = C(R33)2, NR32 AY = OC(:O), OCH2, CH2C(:O), NR29C(:O), NR29SO2; DE = CH2CH2, CH2O, OCH2; G = X:CR8-, bicyclic or tricyclic aryl; X = O, (O-alkyl)2, etc.; Z = H, H,OH, H,O-protective group; R8 = H, halogen, CN, C1-20-alkyl, aryl, C7-20-aralkyl; R14 = H, OH, halogen, O-SO2-alkyl, O-SO2-aryl, O-SO2-aralkyl; R26 = H, C1-10-alkyl, aryl, C7-20-aralkyl, C1-10-acyl, OH, O-protecting group; R29 = H, C1-20-alkyl; R32 = H, C1-4-alkyl, C1-4-acyl; R33 = H, halogen], which interact with tubulins by stabilizing the formed microtubulins (no data). I are able specifically to affect cell division and are suitable, for example for the treatment of malignant tumors ovarian -, stomach -, colon -, adeno -, chest -, lungs -, head and neck carcinoma, malignant melanoma, acute lymphocytic and myelocytic leukemia. In addition I are suitable for the anti-angiogenesis therapy as well as for the treatment of chronic ignitable illnesses (psoriasis, arthritis). For the avoidance of uncontrolled cell rampant growths on as well as the better compatibility of medical implants I can be up and/or brought into polymers materials. According to invention, I can be used alone or for the achievement of additive or synergistic effects in combination with further principles and substance classes applicable in the tumor therapy. Exptl. data from patents PCT/EP00/01333 and PCT/IB00/00657 are reproduced here.

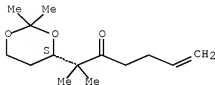
IT 395840-13-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation of 12,13-cyclopropylepothilone derivs. and their use in
pharmaceutical compns.)

RN 305840-13-5 CAPLUS

CN 6-Hepten-3-one, 2-[(4S)-2,2-dimethyl-1,3-dioxan-4-yl]-2-methyl- (CA INDEX
NAME)

Absolute stereochemistry. Rotation (+).



L9 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:790507 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 133:362656

TITLE: Preparation of 6-alkenyl-, 6-alkynyl- and
6-epoxyepothilone derivatives and their antitumor
activity

INVENTOR(S): Klar, Ulrich; Schwede, Wolfgang; Skuballa, Werner;
Buchmann, Bernd; Hoffmann, Jens; Lichtner, Rosemarie
PATENT ASSIGNEE(S): Schering Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 298 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

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|---------------|--|----------|------------------|--------------|
| WO 2000066589 | A1 | 20001109 | WO 2000-1B657 | 20000501 <-- |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
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| CA 2371226 | A1 | 20001109 | CA 2000-2371226 | 20000501 <-- |
| BR 2000010190 | A | 20020108 | BR 2000-10190 | 20000501 <-- |
| EP 1173441 | A1 | 20020123 | EP 2000-922826 | 20000501 <-- |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, MC, PT, IE, SI, LT, LV, FI, RO | | | |
| JP 2002543203 | T | 20021217 | JP 2000-615619 | 20000501 <-- |
| JP 4024003 | B2 | 20071219 | | |
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| NZ 514989 | A | 20040227 | NZ 2000-514989 | 20000501 <-- |

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| IN 2001MN01305 | A | 20070504 | IN 2001-MN1305 | 20011019 <-- |
| BG 106053 | A | 20020531 | BG 2001-106053 | 20011026 <-- |
| NO 2001005278 | A | 20011221 | NO 2001-5278 | 20011029 <-- |
| MX 2001PA11039 | A | 20030630 | MX 2001-PA11039 | 20011030 <-- |
| US 7125893 | B1 | 20061024 | US 2002-979939 | 20020606 <-- |
| IN 2005MN00837 | A | 20070608 | IN 2005-MN837 | 20050802 <-- |
| US 20060046997 | A1 | 20060302 | US 2005-214988 | 20050831 <-- |

PRIORITY APPLN. INFO.:

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| DE 1999-19921086 | A1 | 19990430 <-- |
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| DE 2000-10015836 | A1 | 20000327 <-- |
| DE 2000-10013363 | A | 20000309 <-- |
| WO 2000-IB657 | W | 20000501 <-- |
| IN 2001-MN1305 | A3 | 20011019 <-- |
| US 2002-979939 | A3 | 20020606 <-- |

OTHER SOURCE(S): MARPAT 133:362656

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The antitumor agents, 6-alkenyl-, 6-alkynyl- and 6-epoxyepothilones I (R1a, R1b are same or different = H, C1-C10 alkyl, C6-C12 aryl, C7-C20 aralkyl each optionally substituted; or together = (CH2)m m = 1-5 or -CH2OCH2-; R2a(R2b replace a with b) = H, substituted alkyl, aryl, aralkyl, (CH2)ra-C.tplbond.(or =)C-(CH2)pa-R26a, Q, Q1 where n = 0-5; ra, rb = the same or different and = 0-4; pa, pb = the same or different and = 0-3; R3a = H, substituted alkyl, aryl or aralkyl; R3b = OH, OPG14; R14 = H, OR14a, halogen and R14a = H, SO2-alkyl, SO2-aryl or SO2-aralkyl; R4 = H, substituted alkyl, aryl or aralkyl, halogen, OR25, CN; R26a, R26b = same or different = H, substituted alkyl, aryl or aralkyl, C1-C10 acyl or if pa or pb > 0, addnl. a group OR27; R25 = R27 = R22 = H, PG; R5 = H, substituted alkyl, aryl or aralkyl, (CH2)sT s = 1-4, T = OR22 or halogen; R6, R7 = H or together = bond or O; G = X=CR8 or bi- or tricyclic aryl radical and R8 = H, halogen, CN, or substituted alkyl, aryl or aralkyl; X = O, two OR23 groups, C2-C10-alkylene- α,ω -dioxy straight chain or branched; H/OR9 or CR10R11 group and R23 = alkyl radical, R9 = H, PG, R10,R11 = same or different = H, substituted alkyl, aryl or aralkyl, or together with the methylene are a 5-7 carbocyclic ring; D-E = CH2CH2 or OCH2; A = OC(O), OCH2, CH2C(O), NR29C(O), NR29SO2 and R29 = H, alkyl; Z = O or H/OR12 and R12 = H, PG) were prepared. Thus II was prepared in a multistep synthesis starting from (4S)-4-(2-methyl-1-oxoprop-2-yl)-2,2-dimethyl[1,3]dioxane and 5-trimethylsilylpent-4-in-1-yl magnesium bromide. II had an IC50 value [nM] of 3.0 for the growth inhibition of human MCF-7 breast- and 75 for multidrug resistant NCI/ADR carcinoma cell lines with a selectivity of 2.5. The new epothilone derivs. interact with tubulin by stabilizing microtubuli that are formed. They are able to influence the cell-splitting in a phase-specific manner and are therefore useful in treating diseases or conditions associated with the need for cell growth, division and/or proliferation. Thus the epothilone derivs. are suitable for treating malignant tumors, e.g., ovarian, stomach, colon, adeno-, breast, lung, head and neck carcinomas, malignant melanoma, acute lymphocytic and myelocytic leukemia; and for anti-angiogenesis therapy as well as for treatment of chronic inflammatory diseases (such as psoriasis, arthritis).

IT 305440-13-5P

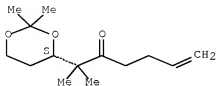
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of 6-alkenyl-, 6-alkynyl- and 6-epoxyepothilone derivs. and their use in pharmaceutical prepn.s.)

RN 305840-13-5 CAPLUS

CN 6-Hepten-3-one, 2-[(4S)-2,2-dimethyl-1,3-dioxan-4-yl]-2-methyl- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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